

## IN THE ABSTRACT

The present invention relates to a method of UE mobility management and a mobile communication system of implementing this method, comprising the steps of: where the system includes: the core network communicating with the universal terrestrial radio access network (UTRAN); UTRAN consisting of multiple radio network systems (RNS) and communicating with one or more UE via Uu interface, and each said RNS comprising a radio network controller (RNC) and one or more nodes communicating with said RNC via Iub interface, while communicating between RNC via Iur interface; UTRAN controlling UE mobility management through radio resource control (RRC) signaling of Uu interface; and said method includes: the UE transmitting uplink an RRC signaling information message to a first RNC so as to request UE mobility management; the first RNC receiving and forwarding said to the core network the uplink RRC signaling message information to the core network; the core network forwarding transparently to a second RNC said uplink RRC signaling information message; and the second RNC receiving and utilizing said the forwarded uplink RRC signaling information message to perform required mobility management.